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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/269,723	06/01/99	FRANCOIS H	P63423US0

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JACOBSON PRICE HOLMAN & STERN
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EXAMINER	
MANLOVE,S	
ART UNIT	**PAPER NUMBER**
1772	7

DATE MAILED: 06/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (Rev.11/00)

1- File Copy

Office Action Summary	Application No.	Applicant(s)	
	09/269,723	FRANCOIS, HUBERT	
	Examiner	Art Unit	
	Shalie A. Manlove	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, -second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "very high" in claim 1 is a relative term, which renders the claim indefinite. The term "very high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. To what extent is very high.

In claims 1-7, the Examiner suggests that the term “characterized in” be replaced with “wherein”.

In claim 4, the terms “preferably” and “advantageously” ranges are vague and indefinite as to scope, because it is unclear if the broad or more narrow ranges are being claimed.

In claim 6, the terminology “any other process” is undefined, and vague. What other process is the Applicant referring to?

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, are rejected under 35 U.S.C. 102(b) as being anticipated by Larmie (USPN 5,551,963).

Referring to claims 1, Larmie teaches a composite wear component produced by classical or centrifugal casting and consisting of a metal matrix whose working face or faces include inserts (col. 3, lines 39-41) which have wear resistance, wherein the inserts consist of a homogenous solid solution (col. 9, lines 30-35, fig. #4) of 20-80% weight of aluminum oxide and 80-20% weight of zirconium oxide (col. 4, lines 8-12, 43-46), and the pad being impregnated with a liquid metal during the casting (col. 7, line 40-50).

As to claim 2, Larmie teaches a composite wear component wherein ceramic material includes 55-60% by weight of aluminum oxide and from 38-42% by weight of zirconium oxide (col.4, lines 8-12, 43-46).

As to claim 3, Larmie teaches a composite wear component wherein ceramic material includes 70-77% by weight of aluminum oxide and from 38-42% by weight of zirconium oxide (col.20, lines 19-20, 39).

As to claim 4, Larmie teaches a composite wear component wherein ceramic material in the insert is between 35-80% by weight preferably between 40 and 60% and advantageously of the order of 50%. (col. 4, lines 8-12, 43-46).

As to claim 6, Larmie teaches a composite wear component wherein the ceramic grains are manufactured by electrofusion, by sintering, by flame spraying or any other process (abstract, line 4).

As to claim 7, Larmie teaches a composite wear component wherein the ceramic grains are joined integrally with the aid of an inorganic or organic liquid adhesive (col. 11, lines 40-50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larmie (USPN 5,551,963) as applied to claim 1 above, and further in view of Tamura Akira EPO 62286661.

In claim 5, Larmie discloses the invention as claimed above. Larmie fails to disclose a composite wear component wherein the composite ceramic grains have a particle size within the range F6 –F22. However, Tamura Akira teaches a composite wear component wherein the composite ceramic grains have a particle size within the range F6 –F22 according to the FEPA standard, for the purpose of manufacturing a uniformly hard grain abrasive ceramic component part (abstract line 5).

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have provided Larmie, a composite wear component wherein the composite ceramic grains have a particle size within the range F6 –F22 according to the FEPA standard in order to manufacture a uniformly hard grain abrasive ceramic component part as taught by Tamura Akira.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larmie (USPN 5,551,963) as applied to claims 1 and 7 above, and further in view of Markhoff-Matheny et al (USPN 4,997,461).

In claim 8, Larmie discloses the invention as claimed above. Larmie fails to disclose a composite wear component wherein the composite ceramic pad does not contain more than 4% adhesive. However, Markhoff-Matheny et al teach a composite ceramic pad not having more than 4% of an adhesive (col. 5, line 25), for the purpose of binding the ceramic mixture to enhance strength and durability of the wear component.

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have provided Larmie a composite ceramic pad not having more than 4% of an adhesive in order to bind the ceramic mixture to enhance strength and durability of the wear component as taught by Markhoff-Matheny et al.

Claims 9 -11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larmie (USPN 5,551,963) as applied to claim 1 above for claims 9, 10, and 11 above, in view of Wahl DE 7326661U.

As to claims 9, 10 and 11, Larmie discloses the invention as claimed above. Larmie fails to disclose a composite wear component having at least two ceramic pads placed side by side leaving a gap of the order of 10 mm in order to permit the arrival of the liquid metal

and the ceramic pad is in the form of a honeycomb structure in which the various cells are of polygonal or circular shape within the ceramic phase and the thickness of cell walls vary in size from 5 to 25 mm..

However, Wahl teaches a composite wear component having at least two ceramic pads placed side by side leaving a gap of the order of 10 mm in order to permit the arrival of the liquid metal and that the ceramic pad is in the form of a honeycomb structure in which the various cells are of polygonal or circular shape and the thickness of cell walls vary in size from 5 to 25 mm within the ceramic phase for the purpose of reinforcing both wear surface and resistance, of the composite ceramic part (page 11, lines 1-3, figures # 2, 3, 4).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shalie A. Manlove whose telephone number is (703) 308-8275. The examiner can normally be reached on M-F 8:00- 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305 3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Shalie A. Manlove
Examiner
Art Unit 1772

June 6, 2001

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